



## Timothy M. Harrigan

**Timothy M. Harrigan**, is the recipient of the 2022 Sukup Global Food Security award for his work improving food security and smallholder farmers' lives by blending local, traditional knowledge with mechanization and scientific knowledge.

Harrigan is an associate professor in biosystems and agricultural engineering at Michigan State University. There, he has an integrated research, teaching, and extension program. He conducts research in mitigation of adverse farming system impacts on the environment and building sustainable agroecosystems. He also specializes in extension work in manure land application, tillage, planting, forage harvesting and handling, machinery management and precision agriculture. Harrigan has also worked extensively in West Africa, developing appropriate scale mechanization to reclaim soil health, and restore the natural productivity of cropland.

Harrigan has made significant improvements in the area of manure management and land application. He developed a technique for manure slurry seeding of cover crops, a process that involves mixing cover crop seed directly into a manure slurry and combining manure application, low-disturbance tillage, and seeding of crop crops in one efficient operation. The result has been fantastic stands of cover crop, which stabilize soil, cycle crop nutrients, reclaim soil health, and restore natural soil productivity.

Harrigan's recent work in West Africa focuses on developing appropriate scale technologies for smallholder farmers. These farmers often face economic and other constraints, doing nearly all of their

fieldwork with hand tools. Harrigan has helped train farmers and other local tradespeople in the construction and repair of equipment to lessen the need for handwork and to increase land productivity. The impact of these changes has had important impacts on women farmers in particular. Utilization of locally-built maize planters allows women farmers to devote time to other domestic tasks, but also for income-generating activities, moving entire families out of subsistence-based farming.

A 35-year member of ASABE, Harrigan has employed his expertise as an associate editor for ASABE journals. Harrigan is active in the Soil and Water Conservation Society, serving as the president of the Michigan chapter. Harrigan is also an executive board member and past president of Tillers International. He is also a member of the Draft-Animal Network.

Harrigan has authored or coauthored 35 peer-reviewed articles and more than 300 presentations. Throughout his career, Harrigan has received a number of awards. He received the Outstanding Extension Specialist from the Michigan Association of Extension Agents and an ASABE Educational Aids Blue Ribbon.

